UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

Jingyuan Yang et al.,

Plaintiffs,

-against-

United States of America,

Defendant.

1:21-cv-06563 (SDA)

OPINION AND ORDER

STEWART D. AARON, United States Magistrate Judge:

Plaintiffs Jingyuan Yang and Yan Li ("Li"), individually and as parents of S.Y., their infant son (collectively, "Plaintiffs"), bring this action against defendant, United States of America (the "United States" or "Defendant"), pursuant to the Federal Tort Claims Act (the "FTCA"), 28 U.S.C. §§ 1346(b), 2671-80, seeking damages for alleged medical malpractice by Dr. Sandy Lau Bui ("Dr. Bui"), an employee of the Charles B. Wang Community Health Center, Inc. ("Community Health Center"), during the labor and delivery of S.Y. (Compl., ECF No. 4, ¶¶ 8-18.)

The parties consented to the jurisdiction of a United States Magistrate Judge, pursuant to 28 U.S.C. § 636. (Consent, ECF No. 22.) Following the entry of an Amended Joint Pretrial Order (Am. JPTO, ECF No. 120),[1] the Court conducted a bench trial on liability from November 4, 2024 through November 8, 2024.[2] (Trial Tr., ECF Nos. 128, 130, 132, 134.)[3] For the reasons set forth below, the Court finds Defendant liable for medical malpractice, to the extent set forth below,

[1] In the Amended JPTO, the parties stipulated to certain statements of fact and law. (*See* Am. JPTO at pp. 4-7.) Citations to these stipulations are made using the following citation form: "Am. JPTO Stip. ¶ __."

[2] The Court bifurcated the trial into liability and damages phases. (*See* 11/8/24 Order, ECF No. 125.)

[3] Citations to the trial transcript are made using the following citation form: "Tr. at __." Where relevant, the name of the witness testifying will be included in parentheses after citation to the transcript page.

and now will move forward with a trial regarding the damages proximately caused by such malpractice.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

Having considered all the evidence and assessed the credibility of the witnesses, the Court makes the following findings of fact and reaches the following conclusions of law pursuant to Federal Rule of Civil Procedure 52.

I. The FTCA

Under the FTCA, the United States is liable for "personal injury or death caused by the negligent or wrongful act or omission of any employee of the Government while acting within the scope of his office or employment, under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred." 28 U.S.C. § 1346(b).[4] The United States Department of Health and Human Services deemed the Community Health Center, located at 268 Canal Street, New York, New York 10013, to be eligible for FTCA coverage in calendar year 2019 pursuant to the Federally Supported Health Centers Assistance Act ("FSHCAA"), 42 U.S.C. § 233(g)-(n).[5] Dr. Bui was an employee of the Community Health Center as of the time of S.Y.'s birth in December 2019, and was acting within the scope of her employment at the Community Health Center during her care of Plaintiff

[4] Am. JPTO Stip. ¶ 1.

[5] Am. JPTO Stip. ¶ 3.

Li and the delivery of S.Y.[6] Dr. Bui therefore is deemed an employee of the federal government under the FSHCAA for purposes of the FTCA.[7]

II. Medical Malpractice Under New York Law

Because the medical care at issue occurred in New York, the substantive law of New York governs Plaintiffs' FTCA claims. *See Taylor v. United States*, 121 F.3d 86, 89 (2d Cir. 1997).[8] "To establish a claim for medical malpractice under New York law, a plaintiff must prove (1) that the defendant breached the standard of care in the community, and (2) that the breach proximately caused the plaintiff's injuries."[9] *Arkin v. Gittleson*, 32 F.3d 658, 664 (2d Cir. 1994) (citing New York cases).[10]

Plaintiffs bear the burden of proving each element of their claim by a preponderance of the evidence.[11] *See Hersko v. United States*, No. 13-CV-03255 (JLC), 2017 WL 1957272, at *4 (S.D.N.Y. May 11, 2017) (citing *Kawache v. United States,* No. 08-CV-03128 (KAM) (SMG), 2011 WL 441684, at *14 (E.D.N.Y. Feb. 7, 2011), *aff'd*, 471 F. App'x 10 (2d Cir. 2012)). A fact has been proven by a preponderance of the evidence if "the scales tip, however slightly, in favor of the party with the burden of proof as to that fact." *Ostrowski v. Atl. Mut. Ins. Companies*, 968 F.2d 171, 187 (2d Cir. 1992) (cleaned up).

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[6] Am. JPTO Stip. ¶ 4.

[7] *Id*.

[8] Am. JPTO Stip. ¶ 2.

[9] Am. JPTO Stip. ¶ 5.

[10] It also "is necessary first to establish the existence of a duty." *Burtman v. Brown*, 97 A.D.3d 156, 161 (1st Dep't 2012). Whether a defendant doctor owes a plaintiff a duty of care is a question for the court. *See McNulty v. City of New York*, 100 N.Y.2d 227, 232 (2003). Defendant does not dispute that Dr. Bui owed Plaintiffs a duty of care. (*See* 3/13/25 Tr., ECF No. 148, at 35.)

[11] Am. JPTO Stip. ¶ 6.

Plaintiff's assertion that, once a plaintiff makes out a *prima facie* case of malpractice, "the defendant has the obligation to go forward with the evidence to prove their case" and "[o]therwise, it's a directed verdict for the plaintiff" (3/13/25 Tr. at 19-20) is incorrect.[12] *See Kanengiser v. Rosenblum*, 189 F.3d 461, 461 (2d Cir. 1999) (plaintiff not entitled to directed verdict merely because plaintiff has established *prima facie* case of medical malpractice) (citing cases); *see also LaMarca v. United States*, 31 F. Supp. 2d 110, 124 (E.D.N.Y. 1998) (establishment of *prima facie* case permits trier of fact to reasonably find for plaintiff by drawing permissible inferences favorable to him, but "does not mean that the plaintiff is entitled to a directed verdict or that the burden is shifted to the defendant"). The ultimate question of whether malpractice occurred remains with the trier of fact. *See Kanengiser*, 189 F.3d at 461 (citing *Nicholas v. Reason*, 84 A.D.2d 915 (4th Dep't 1981)).

"New York law further provides that, except as to matters within the ordinary experience and knowledge of laymen, . . . expert medical opinion evidence is required to make out both of [the elements of a medical malpractice claim, *i.e.*, breach of the standard of care in the community and that the breach proximately caused the plaintiff's injuries]." *Hersko*, 2017 WL 1957272, at *4 (quoting *Milano by Milano v. Freed,* 64 F.3d 91, 95 (2d Cir. 1995)); *see also Arkin v. Resnick*, 68 A.D.3d 692, 695 (2d Dep't 2009) ("The plaintiff's expert is required to show that the alleged departure was a substantial factor in producing the injury."); *Buchanan v. Hesse*, No. 21-649-CV, 2022 WL 829163, at *1 (2d Cir. Mar. 21, 2022) (expert's opinion "must demonstrate

[12] None of the cases cited by Plaintiffs are to the contrary. (*See* Pls.' Post-Trial Br., ECF No. 136, at 3.) Notably, *Williams v. KFC Nat. Mgmt. Co.*, 391 F.3d 411, 421-22 (2d Cir. 2004), involved the standard for a plaintiff to establish a *prima facie* case to avoid summary judgment and, thus, is inapposite.

the requisite nexus between the malpractice allegedly committed and the harm suffered") (quoting *Anyie B. v. Bronx Lebanon Hosp.*, 128 A.D.3d 1, 3 (1st Dep't 2015)).

"In a bench trial such as this, it is the Court's job to weigh the evidence, assess credibility, and rule on the facts as they are presented." *Greasley v. United States*, No. 15-CV-00642-A (RJA), 2021 WL 935731, at *6 (W.D.N.Y. Mar. 11, 2021) (quoting *Mann v. United States*, 300 F. Supp. 3d 411, 418 (N.D.N.Y. 2018)). "The Court is in the best position to evaluate each witness's demeanor and tone of voice as well as other mannerisms that bear heavily on one's belief in what the witness says." *Id.* (cleaned up); *see also Donato v. Plainview-Old Bethpage Cent. Sch. Dist.*, 96 F.3d 623, 634 (2d Cir. 1996). "The court is also entitled, just as a jury would be . . ., to believe some parts and disbelieve other parts of the testimony of any given witness." *Id*. (quoting *Diesel Props S.R.L. v. Greystone Bus. Credit II LLC*, 631 F.3d 42, 52 (2d Cir. 2011)).

III. S.Y.'s Delivery[13]

On December 5, 2019, when Li was 41 weeks pregnant, Li was seen by Dr. Bui at the Community Health Center and underwent an ultrasound evaluation, which showed that Li had a low amniotic fluid index. (Am. JPTO Stip. ¶ 9.) Dr. Bui directed Li to go to the New York Presbyterian Hospital, Lower Manhattan ("NYP"), where Dr. Bui had admitting privileges, for induction of labor. (*Id*.) Li was admitted to NYP on the afternoon of December 5, 2019. (*Id*. ¶ 10.) On the morning of December 6, 2019, a certified nurse midwife from the Community Health Center, who was caring for Li at NYP, asked Dr. Bui to come to NYP following concerns about the

[13] Plaintiff Li received prenatal care at the Community Health Center between April and early December 2019. (Am. JPTO Stip. ¶ 8.) Plaintiffs do not assert a claim of malpractice stemming from Li's prenatal care at the Community Health Center. (*Id*.) Thus, the Court does not summarize evidence in the record regarding Plaintiff Li's pre-natal care.

infant's fetal heart tracing. (*Id*. ¶ 11.) Shortly after her arrival at NYP on the morning of December 6, 2019, Dr. Bui examined Li. (*Id*. ¶ 12.) Based on the infant's heart tracing, Dr. Bui advised Li that the infant was "at risk" and should be delivered by an emergency cesarean section ("C-section"). (*Id*.) Li consented to the procedure. (*Id*.)

Dr. Bui made the uterine incision at 11:28 a.m. (Tr. at 67 (Bui).) The fetus was in the occiput posterior ("OP") position at approximately zero station; the fetal head was deeply impacted in the maternal pelvis; the head was hyperextended; there was a nuchal cord;[14] and the maternal abdominal muscles were contracted. (Tr. at 31-33, 65-66, 69, 79 (Bui); *see also* Joint Ex. 17-A at NYP 13374-75.)[15] Dr. Bui delivered S.Y. at 11:30 a.m. (Am. JPTO Stip. ¶ 13; *see also* Tr. at 67 (Bui) ("Q. How long did the whole delivery take from uterine incision through removal of the baby through the incision? A. About one to two minutes in total.").)[16] Dr. Bui's operative notes state, in relevant part, "[t]he baby was delivered in OP position, nuchal cord was reduced, and infant handed to the awaiting pediatrician for resuscitation." (Joint Ex. 17-A at NYP 13374.)

Several nurses and two other doctors were present during the C-section. (Am. JPTO Stip. ¶¶ 14-18.) Dr. Cynthia Isedeh, a newborn hospitalist who was present during the C-section, testified at trial. (Tr. at 114 (Isedeh).) Dr. Isedeh testified that she did not recall the exact time that she entered the operating room, but it was before S.Y. was delivered. (*Id*.) She further testified that she was busy setting up equipment and doing checklists and did not recall anything

[14] A nuchal cord is where the umbilical cord wrapped around the baby's neck. (*See* Tr. at 175 (Luciani), 264 (Sutton).)

[15] The parties stipulated that all the Joint Exhibits were authentic under Federal Rule of Evidence 902(11) and business records under Federal Rule of Evidence 803(6). (Am. JPTO Stip. ¶ 22.)

[16] The Court makes additional factual findings regarding the delivery in considering the element of breach of the standard of care. (*See* Section V, *infra*.)

about the C-section procedure or the specific maneuvers that Dr. Bui used to deliver S.Y. (*Id*. at 115-20; *see also* Am. JPTO Stip. ¶ 15.)

The parties stipulated that, if any of the other providers present during the C-section had been called to testify, they would have testified that they had no recollection of relevant events. (Am. JPTO Stip. ¶¶ 14, 16-19.) NYP Physician Assistant Mingming Chan would have testified that she was present during the C-section, but did not remember specifically what Dr. Bui did to remove the fetus from the uterus; did not remember the positioning of the fetus after the incision, including which direction the fetus's face was facing or the position of the fetus's head; did not recall anything about the process of removing the fetus during the C-section; and did not recall any particular maneuver or maneuvers that Dr. Bui used to remove the fetus from the mother's pelvis. (*Id*. ¶ 14.) If called as a witness, NYP Registered Nurse Renee Samuels would have testified that she was present during the C-section, but did not have any memory of seeing anything particular as to what was being done during the C-section. (*Id*. ¶ 16.) If called as a witness, NYP Certified Registered Nurse Anesthetist Kristen Finazzo would have testified that she was present during the C-section, but did not remember anything about the actual procedure performed by Dr. Bui. (*Id*. ¶ 17.) If called as a witness, NYP anesthesiologist Dr. Jason White would have testified that he was present during the C-section, but had no recollection of anything that happened during the actual C-section, including the incision or the removal of the fetus. (*Id*. ¶ 18.) Plaintiff Li testified that she could not see what Dr. Bui was doing because there was a curtain in front of her. (Tr. at 126 (Li).)

After S.Y. was delivered, he was limp, did not cry, was not breathing and had no pulse. (Tr. at 43, 48, 71 (Bui).) NYP neonatologist Dr. Johanna Calo provided respiratory care to S.Y.

immediately after the delivery. (Am. JPTO Stip. ¶ 19.) Dr. Calo testified that S.Y. already had been delivered when she entered the operating room and that, according to her note, she arrived three minutes after his birth. (Tr. at 86-87 (Calo).) At that time, the pediatrician was giving positive pressure ventilation and chest compressions. (*Id*. at 87.) Dr. Calo intubated S.Y. at four minutes of life. (*Id*. at 88.) Dr. Calo prepared to administer epinephrine, but S.Y.'s heart rate improved, and it was not necessary. (*Id*. at 90-91.) At five minutes after birth, Dr. Calo assessed an APGAR score of 1. (*Id*. at 87.) Dr. Calo explained that the APGAR score is based upon five assessments, rated zero to two points each, with respect to appearance, pulse, grimace, color and respiration.[17] (*Id*. at 87-88.) Dr. Calo testified regarding cord blood gas and venous blood gas readings, which reflected that S.Y. was not breathing properly postnatally. (*Id*. at 92-103, 108.) Dr. Calo confirmed that perinatal asphyxia was a proper diagnosis, but did not form an opinion on the cause of S.Y.'s respiratory failure at birth. (*Id*. at 107, 112.)

IV. Subsequent Medical Treatment

Following the delivery, S.Y. was transferred to the neonatal intensive care unit at Weill Cornell Medical Center ("Weill Cornell"), part of the New York-Presbyterian system, for further management. (Jt. Ex 17 at NYP 00025, NYP 00032.) S.Y. underwent a head cooling procedure and therapeutic hypothermia, given clinical evidence of hypoxic ischemic encephalopathy ("HIE").[18]

[17] Dr. Calo appears to have listed one of the categories, appearance/color, twice. The five categories are: Activity (muscle tone), Pulse (heart rate), Grimace (response to stimulation, such as suctioning the baby's nose), Appearance (color) and Respiration (breathing). *See* Healthline website, APGAR Score: *What You Should Know*, available at https://perma.cc/GS3Y-L6MN (as of Apr. 19, 2025).

[18] HIE "is an umbrella term for a brain injury that happens before, during, or shortly after birth when oxygen or blood flow to the brain is reduced or stopped." National Institute of Neurological Disorders and Stroke website, *Hypoxic Ischemic Encephalopathy*, available at https://perma.cc/R7UE-VHCZ (as of Mar. 8, 2025).

(*Id*. at NYP 00043 NYP 00123.) A pediatric neurology note from December 10, 2019, states "[n]eurologic exam with spontaneous movements and improving tone, except for [right] arm which has decreased movement and flexed [right] hand upon observation, likely Erb's palsy or brachial plexus injury."[19] (*Id*. at NYP 00106.) On December 11, 2019, pediatric neurologist Dr. Jamie Lee Palaganas noted "[w]hile a brachial plexus injury related to birth is possible, there does not appear to be a significant history to raise concern for an acute problem. It is possible this is more related to underlying musculoskeletal abnormalities or abnormal position in utero." (*Id*. at NYP 00121-22.)

On December 11, 2019, Dr. Mary Vernov noted that S.Y. had been extubated to room air the previous day, but was transitioned to noninvasive positive pressure ventilation overnight due to respiratory distress. (Jt. Ex. 17 at NYP 00123.) A chest x-ray ordered by Dr. Vernov indicated a right upper lobe atelectasis, or a collapse of S.Y.'s right lung, and elevation of the right hemidiaphragm.[20] (*Id*. at NYP 01426-27.) Under impression, Dr. Vernov noted "consider phrenic nerve injury."[21] (*Id*. at NYP 00124.) Dr. Vernov recommended an ultrasound to evaluate diaphragmatic excursion. (*Id*.)

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[19] "Erb's palsy is a disorder in which the brachial plexus, a group of nerves near the shoulder that connects the spine to the arm and hand, is stretched or torn." *U.G. by Nanema v. United States*, No. 21-CV-02615 (VEC), 2023 WL 3122702, at *1 (S.D.N.Y. Apr. 27, 2023). "Erb's palsy is sometimes referred to as a brachial plexus injury." *Id*. at *1 n.3.

"[T]he brachial plexus is a collection of nerves that comes out of the neck and goes into the arm and gives the arm movement and gives you the ability to feel things in your arm and in your hand. (Tr. at 359 (Adler).) "[T]he fifth, sixth, seventh, and eighth cervical nerves are the first four nerves of the brachial plexus, and then there is a nerve that comes out in the chest, the first thoracic nerve. (*Id*. at 359-60.)

[20] "Atelectasis" means "collapse of the expanded lung." Merriam-Webster.com Dictionary, *Atelectasis*, available at https://perma.cc/S8NT-ZM6Y (as of Apr. 19, 2025).

[21] The phrenic nerve is a nerve that is formed by branches of several cervical nerves. (*See* Tr. at 360 (Adler) (testifying that it was the third, fourth, and fifth cervical nerves); 407 (Rubenstein) (testifying that phrenic

On December 12, 2019, S.Y. was seen for a general surgery consult regarding phrenic nerve injury. (Jt. Ex. 17 at NYP 00144.) The Surgery Consult Note references a portable ultrasound that was "notable for markedly decreased respiratory motion of the right hemidiaphragm suggestive of phrenic nerve palsy." (*Id*.) Dr. Nitsana Spigland recommended supportive care through supplemental oxygen and mechanical ventilation as needed, but noted that if there was no improvement in six to eight weeks, he recommended surgical plication of the right diaphragm. (*Id*. at NYP 00145-46.)

S.Y. was reintubated on December 13, 2019 and placed on conventional ventilation. (Jt. Ex. 17 at NYP 00160.) A neurology note stated that S.Y. was found to have phrenic nerve paralysis on the right. (*Id*.) A brain MRI conducted on December 13, 2019 showed no evidence of HIE. (*Id*. at NYP 00176; *see also id*. at NYP 1440-41.)

On December 14, 2019, pediatric neurologist Dr. Palaganas saw and examined S.Y. (Jt. Ex. 17 at NYP 00175.) Dr. Palaganas noted that his exam was consistent with "traction injury of the brachial plexus and phrenic nerve causing an Erb's palsy and diaphragm paralysis." (*Id*.) Dr. Palaganas further noted, that, on his initial examination, restricted range of motion of S.Y.'s right arm raised a question to him of a mechanical/structural cause of S.Y.'s abnormal arm posture/weakness, but that had improved, and given phrenic nerve palsy on the same side, he concluded that S.Y.'s presentation was "most consistent with traction injury[.]" (*Id*.)

nerve comes off first, second and third cervical spine nerves).) The phrenic nerve controls movement of the diaphragm. (*Id*. at 360 (Adler); 407 (Rubenstein).)

S.Y. was extubated again on December 19, 2029. (Jt. Ex. 17 at NYP 00226.) On December 26, 2019, S.Y. was seen for an ENT[22] consult for evaluation of his airway. (*Id*. at NYP 00290-91.) The assessment noted that S.Y. had a history of HIE complicated by phrenic nerve paralysis and right lung collapse with persistent respiratory requirement. (*Id*.) A flexible fiberoptic laryngoscopy demonstrated normal laryngeal anatomy. (*Id*.) Dr. Steven Rosenblatt noted that the lung collapse could be secondary to diaphragmatic issues/phrenic nerve injury, but that a formal airway evaluation may be useful to rule out anatomic contributions. (*Id*. at NYP 00291; *see also* NYP 00333 (pulmonary consult note).)

S.Y. was reintubated on December 29, 2019, for worsening respiratory distress. (Jt. Ex. 17 at NYP 00323, NYP 000333.) On December 31, 2019, Dr. Rosenblatt performed an airway examination (flexible bronchoscopy) that showed right upper lobe mucous plugging, which was suctioned out, and mild left upper lobe malacia.[23] (*Id*. at NYP 00337-38, NYP 00374.)

On January 2, 2020, S.Y. was seen by a genetics fellow for a medical genetics consult for hypotonia.[24] (Jt. Ex. at 17 at NYP 000402-04.) The fellow, and attending Dr. Christopher Cunniff, recommended obtaining a creatine kinase to evaluate for muscle breakdown, as well as further evaluations by neurology and ophthalmology. (*Id*. at NYP 00404.)

[22] "An otolaryngologist, or ENT, is a healthcare specialist who treats conditions affecting your ears, nose and throat." Cleveland Clinic website, *Otolaryngologist*, available at https://perma.cc/Y52P-D9KS (as of Apr. 19, 2025).

[23] "Malacia" means "abnormal softening of a tissue." Merriam-Webster.com Medical Dictionary, *Malacia*, available at https://perma.cc/T2ZF-DHAD (as of Apr. 19, 2025).

[24] Hypotonia is a condition of diminished tone of the skeletal muscles. *See Dorland's Illustrated Medical Dictionary* ("*Dorland's*") at 986 (33d ed. 2020).

A chest x-ray taken on January 2, 2020 demonstrated stable right upper lobe collapse with volume loss. (Jt. Ex. at 17 at NYP 00395.) On January 3, 2020, neonatology attending Dr. Catherine Chang noted that she met with S.Y.'s parents to discuss his work-up related to ventilation. (*Id*. at NYP 00428.) Dr. Chang explained that, while S.Y. did have right diaphragmatic weakness (and possibly paralysis), it was unclear it that was the sole pathology or a contributor, particularly given the recurrent atelectasis focused on his right upper lobe. (*Id*.) Dr. Chang explained that, after discussion with pulmonology and ENT, it was reasonable to reattempt extubation, but that if S.Y had recurring right upper lobe atelectasis it may then be reasonable to pursue a flexible bronchoscopy as well as a CT scan of the chest to rule out other rare causes of right upper lobe collapse. (*Id*.; *see also id*.at NYP 00420 (pulmonary attending brief).)

S.Y. was extubated again on January 5, 2020, but a chest x-ray showed continuing right-side atelectasis, and the following day he was reintubated. (Jt. Ex. at 17 at NYP 00443, NYP 00464-65; *see also id.* at 00487.) A chest ultrasound on January 6, 2020 showed diminished to no motion of the right hemidiaphragm and normal motion of the left hemidiaphragm and consolidation of the visualized right lung base. (*Id*. at NYP 00463.) On January 7, 2020, S.Y. underwent a bronchoscopy due to atelectasis of the right upper lobe. (*Id*. at NYP 00469.) Dr. Katharina Graw-Panzer noted 50% narrowing with malacia of the right upper lobe bronchial orifice and thick secretions at the right upper lobe orifice. (*Id*. at NYP 00469-70; *see also id*. at NYP 00472 (pulmonary note referring to 50% malacia and right upper lobe stenosis with mucous plugging).) On January 8, 2020, Dr. Spigland noted that he favored performing a diaphragmatic plication surgery in hopes of avoiding a tracheostomy. (*Id*. at 00486; *see also id*. at NYP 00506.) On January

11, 2020, Dr. Chang noted that S.Y. continued to have copious oral secretions and did not appear to swallow. (*Id*. at NYP 00527.)

On January 13, 2020, S.Y. underwent an MRI of the brachial plexus, which showed grossly normal appearance of bilateral brachial plexus in cervical plexus. (Jt. Ex. 17 at NYP 1500-01.) A subsequent note from Dr. Vernov indicated no evidence of avulsion on the MRI, but that it "may be consistent with more subtle stretch injury." (*Id*. at NYP 00601.) On January 21, 2020, a pediatric geneticist recommended additional genetic testing related to congenital hypotonia.[25] (*Id*. at NYP 00651.)

On January 22, 2020, S.Y. underwent diaphragmatic plication surgery. (Jt. Ex. 17 at NYP 00671-72; *see also* NYP 14695-96.) Diaphragmatic eventration was reported intraoperatively.[26] (*See id*. at NYP 00713.) A postoperative chest x-ray was significant for plicated right hemidiaphragm and unchanged confluent right upper lobe opacity with volume loss. (*Id*. at NYP 00710.) Dr. Vernov's January 22, 2020 note included her impression that diaphragmatic eventration was congenital versus acquired in the setting of phrenic nerve palsy and that the right upper lobe collapse was "likely due to phrenic nerve palsy compounded by 50% narrowing and malacia of right upper lobe bronchial orifice[.]" (*Id*. at NYP 00714.)

On January 23, 2020, Dr. Spigland noted that an x-ray showed a nicely plicated diaphragm but collapse of right upper lobe and that S.Y. would be evaluated by pulmonology for a repeat bronchoscopy. (Jt. Ex. 17 at NYP 00729.) Dr. Vernov noted that S.Y.'s right upper lobe collapse

[25] Congenital refers to a condition existing at and usually before birth, regardless of its causation. *Dorland's* at 398.

[26] Diaphragmatic eventration is "a congenital anomaly characterized by failure of muscular development of part or all (or occasionally both) hemidiaphragms, resulting in superior displacement of abdominal viscera and altered lung development." *Dorland's* at 648.

worsened postoperatively. (*Id*. at NYP 00737.) The following day, a chest x-ray showed improved aeration of the right upper lobe with persistent partial collapse. (*Id*. at NYP 00746-48.) On January 25, 2020, Dr. Spigland noted that S.Y. was doing well and weaning toward extubation with collapse of the right upper lobe improved. (*Id*. at NYP 00770.) S.Y. was extubated on January 26, 2020, but was reintubated the following day after complete right lung collapse. (*Id*. at NYP 00789, NYP 00815-16.) On January 27, 2020, Dr. Spigland noted that S.Y. was showing right lung collapse despite the surgery and that x-rays looked good while he was intubated with positive pressure, but off positive pressure the lung collapsed. (*Id*. at NYP 00796.) Dr. Spigland noted that "[t]his may be the result of hypotonia, secretions inability to swallow and bronchomalacia"[27] and that S.Y. may need a tracheostomy and gastronomy tube. (*Id*.)

On February 5, 2020, S.Y. underwent another bronchoscopy, which showed right upper lobe malacia. (Jt. Ex. 17 at NYP 00933.) The bronchoscopy showed persistent tracheobronchomalacia[28] with minimal secretions and no mucus plugging. (*Id*. at NYP 00953; *see also id.* at NYP 01322.) The pulmonary assessment was right diaphragm eventration status/post plication and persistent right upper lobe collapse likely secondary to right upper lobe stenosis/malacia with a plan for a tracheostomy. (*Id*. at NYP 00953.) ENT was consulted on February 6, 2020, and Dr. Rosenblatt agreed with the approach. (*Id*. at NYP 00971-72.) S.Y.

[27] Bronchomalacia is a deficiency in the cartilaginous wall of the bronchus, the air passages connecting the trachea to the lungs, often accompanied by some degree of tracheomalacia, or a softening of the trachea cartilages, and may be congenital or acquired. *See Dorland's* at 249, 250, 1915.

[28] "Tracheobronchomalacia (TBM) happens when your trachea (airway or windpipe) and bronchial tubes (airways leading to your lungs) close down or collapse, so you have trouble breathing." Cleveland Clinic website, *Tracheobronchomalacia*, available at https://perma.cc/C8X4-LV4A (as of Apr. 19, 2025).

received a tracheostomy on February 11, 2020. (*Id*. at NYP 01038; *see also* Jt. Ex. 17-C at 16342-48.) On February 18, 2020, S.Y. received a gastronomy tube ("G-tube"). (JX17 at NYP 01156.)

A March 2, 2020 pulmonary note indicated that S.Y. was waiting for bed placement at a rehabilitation facility and that his right arm strength was minimally improved. (Jt. Ex. 17 at NYP01305.) On March 5, 2020, S.Y. was transferred to an inpatient rehabilitation program at Children's Specialized Hospital in New Jersey. (*Id*. at NYP 00036; Jt. Ex. 5 at CSH 0059-63.)

S.Y. also continued to receive treatment from doctors at Weill Cornell. On March 24, 2020, Dr. Cunniff conducted a video follow-up visit regarding the additional genetic testing that he previously had ordered. (Jt. Ex. 17-B at 14613.)) Dr. Cunniff reported that the testing found "a likely pathogenic variant . . . of the Titin (TTN) gene."[29] (*Id*.) Dr. Cunniff noted "[t]he disorders associated with Titin pathogenic variants . . . do not correspond to [S.Y.'s] phenotype," as Li had the same pathogenic variant but no "cardiac or skeletal muscle symptoms." (*Id.*) Dr. Cunniff concluded that "additional investigation is warranted" and requested Weill Cornell's genetics laboratory to complete chromosome microarray and whole exome sequencing studies "to see if any other loci that might explain [S.Y.'s] phenotype can be identified." (*Id*.)

On April 20, 2020, Dr. Kevin Gurcharran saw S.Y. via a telehealth visit to establish care for hypotonia and brachial plexus palsy. (Jt. Ex. 17 at NYP 16323.) Dr. Gurcharran noted that S.Y. had brachial plexus palsy of the right upper extremity, but it had been getting better with physical and occupational therapy. (*Id*.) In a visit note from April 27, 2020, pediatrician Dr. Elizabeth

[29] "The TTN gene provides instructions for making a very large protein called titin. This protein plays an important role in skeletal muscles, which the body uses for movement, and in heart (cardiac) muscle." MedlinePlus, *TTN gene*, https://perma.cc/4U95-LC9T (as of Aug. 14, 2024).

Kajunski Fiorino noted that the "etiology of the patient's deficits are unclear, and genetic/neuro evaluation is ongoing." (*Id*. at NYP 16312.)

On June 25, 2020, S.Y. was discharged from Children's Specialized Hospital to home care, with recommendations to follow up with a primary care physician and specialists in pulmonology, cardiology, gastroenterology, neurology and genetics. (Jt. Ex. 5 at CSH 0388, CSH 0392.) Children's Specialized Hospital also recommended that S.Y. receive early intervention and private duty nurse services. (*Id.* at CSH 0393.) Initially, S.Y. received 24-hour nursing care that was reduced to 16 hours daily after one or two months. (Tr. at 134-35 (Li).) S.Y. also received ventilation support, airway suctioning support and feedings through his G-tube. (*See id*.) In September 2020, the whole genome chromosomal microarray and clinical exome sequence analysis order by Dr. Cunniff came back negative. (Jt. Ex. 17. at NYP 14656, 14658.)

In April 2021, S.Y. underwent an electromyography ("EMG") and a nerve conduction study ("NCS") at the Hospital for Special Surgery ("HSS").[30] (Jt. Ex. 10 at HSS 041.) The impression was that the study was "abnormal," with "electrodiagnostic findings supportive of chronic neurogenic process affecting predominantly the motor axons." (*Id*.) The EMG consultant, Dr. Dora Leung, further noted that the electrophysiologic findings could be consistent with chronic multilevel cervical radiculopathies or neuronopathies on the right. (*Id*.) Dr. Leung also noted that there was only mild active denervation seen in right biceps brachi, with chronic neurogenic changes

[30] An EMG, which stands for electromyography, is "an electrodiagnostic test which assesses function of the peripheral nerves and muscles and neuromuscular junction at times." (Tr. at 434 (Rubenstein).) "There are two parts . . . [o]ne is the nerve conduction, which basically assesses the functionality of peripheral nerves to conduct impulses, both motor and sensory, and then there is a second part, which is a so-called needle EMG, in which the muscle electrical characteristics are assessed." (*Id*.)

consistent with re-innervation and that there was no electrophysiologic evidence for active myopathy. (*Id*.)

In 2021, S.Y. made several visits to the Children's Hospital of Philadelphia ("CHOP") for further evaluation of his condition. (*See* Jt. Ex. 4.) Attending neurologist Dr. Sabrina Yum saw S.Y. on May 26, 2021 for an office visit. (*Id*. at CHOP 198-99.) Dr. Yum noted the etiology of S.Y.'s complex medical and neurological problems remained to be determined even after an extensive genetic work up. (*See id*.) She further noted that a muscle ultrasound was most suggestive of a myopathic process and recommended further genetic testing given the pathogenic TTN gene. (*Id*.; *see also id*. at CHOP 159.) In September 2021, S.Y. saw an orthopedist at CHOP, Dr. Apurva Shah, who noted that given his underlying hypotonia and hypermobility, his muscle weakness was most likely not consistent with brachial plexopathy, but possibly an underlying myopathy.[31] (*Id*. at CHOP 138.)

Dr. Yum saw S.Y. again on September 27, 2021. (Jt. Ex. 4 at CHOP 108.) Dr. Yum concluded that, based on a subsequent muscle ultrasound of S.Y., he clearly had a neuromuscular process.[32] (*Id*.) An EMG/NCS performed that day was reported to be abnormal with electrophysiologic evidence most consistent with a diffuse chronic myopathic process. (*Id*. at CHOP 067-69.) The neuromuscular fellow performing the tests also noted that there was no evidence of chronic denervation to suggest co-existing brachial plexopathy involving the right upper trunk, but noted that the NCS was limited due to discomfort and the fact that a prior study reportedly was normal. (*Id*.) Dr. Yum reiterated that the EMG/NCS study was most consistent with a chronic myopathic

[31] Myopathy refers to a muscle disease. (Tr. at 374 (Adler), 424 (Rubenstein).)

[32] Neuromuscular refers to the relationship between muscles and nerves. *Dorland's* at 1249.

process with no evidence of chronic denervation, but noted that S.Y.'s right median motor response was much smaller than on the left side. (*Id*. at CHOP 108; *see also id*. at CHOP 67.)

In April 2022, Plaintiffs consented to have S.Y. participate in a clinical research study at the National Institute of Neurological Disorders and Stroke at the National Institutes of Health ("NIH") titled "Clinical and Molecular Manifestations of Neuromuscular and Neurogenetic Disorders of Childhood." (Jt. Ex. 14 at NIH 064-76.) S.Y. had been referred to NIH for further evaluation of his neuromuscular symptoms. (*Id*. at NIH 031.) An April 26, 2022 visit note stated that S.Y. was being evaluated at NIH for "evaluation of his unknown myopathy[.]" (*Id.* at NIH 035.) On June 24, 2022, during an initial study visit, Dr. Safoora Syeda, a neuromuscular fellow, noted the chief complaint as "concern for myopathy." (*Id*. at NIH 024-25.) Dr. Syeda noted that S.Y.'s presentation of symptoms was "quite perplexing with various confounding factors[.]" (*Id*. at NIH 031.) She noted that his significant right upper extremity weakness "was likely present since birth[,]" but had improved with therapy. (*Id*.) Dr. Syeda also discussed the possibility of an infectious process, which was being pursued by doctors at CHOP and further evaluation of a potential genetic etiology. (*Id*.)

V. First Element: Breach Of The Standard Of Care

"In New York, '[a] doctor is charged with the duty to exercise due care, as measured against the conduct of his or her own peers—the reasonably prudent doctor standard.'" *Legg v. United States*, No. 14-CV-00838 (DEP), 2016 WL 9415490, at *11 (N.D.N.Y. Nov. 17, 2016) (quoting *Nestorowich v. Ricotta*, 97 N.Y.2d 393, 398 (2002)). "Generally, the standard of care for a physician is one established by the profession itself." *Spensieri v. Lasky*, 94 N.Y.2d 231, 238 (1999). "This standard requires doctors to 'exercise that reasonable degree of learning and skill

that is ordinarily possessed by physicians and surgeons in the locality where the doctor practices.'" *Id*. (quoting *Nestorowich*, 97 N.Y.2d at 398)). "Generally, in order to show that the defendant did not exercise ordinary and reasonable care, the plaintiff 'must show what the accepted standards of practice were and that the defendant deviated from those standards or failed to apply whatever superior knowledge he had for the plaintiff's benefit.'" *Venetsky v. United States*, No. 16-CV-08464 (DF), 2019 WL 1768967, at *9 (S.D.N.Y. Mar. 31, 2019) (quoting *Sitts v. United States*, 811 F.2d 736, 739 (2d Cir. 1987)) (cleaned up).

Plaintiffs presented testimony from their expert in obstetrics and gynecology, Dr. Richard Luciani, regarding the standard of care and breach and Defendant presented the testimony of its rebuttal witness, Dr. Desmond Sutton. Dr. Luciani is a board-certified obstetrician gynecologist with 44 years of experience and currently serves as an attending physician at hospitals in New Jersey. (Tr. at 170-72 (Luciani).) Dr. Sutton is board certified in obstetrics and gynecology and maternal fetal medicine and currently serves as medical director of labor and delivery at Mount Sinai West Hospital. (*Id*. at 231-32 (Sutton).)

Plaintiffs argue that a technique known as the push-up method was the applicable standard of care in this case because it avoided lateral traction to the fetal head and, of the available techniques for disimpacting a deeply impacted fetal head, the push-up method was the only one that Dr. Bui was trained to do. (Pls.' Post-Trial Br., at 5-10.) Plaintiffs further argue that Dr. Bui breached the standard of care by failing to use the push-up method; using multiple attempts to disimpact the fetal head using her hand and doing so from the side instead of only from the anterior position; and applying force to the fetal head not only from the anterior, but

from the right and left sides, and doing so for approximately one minute and not for five seconds from the anterior only. (*Id*. at 11.)

A. The Standard Of Care

Both Dr. Luciani and Dr. Sutton agreed that it was appropriate for Dr. Bui to make an initial attempt to use her hand to break the suction to release the impacted fetal head. (Tr. at 176,[33] 189-90 (Luciani); *see also id*. at 206 (Luciani) (Q. So you testified that if presented with an impacted fetal head in a C-section, you agree that the first maneuver the obstetrician should attempt is to put the hand behind the baby's head to break the suction, correct? A. That should be the initial attempt, absolutely."); Tr. at 267-69 (Sutton); *see also id*. at 321-22 ("Q. Dr. Sutton, what is your opinion, with respect to the first procedure that an obstetrician should use when confronting an impacted fetal head during a Cesarean section? . . . A. Again, you really don't know that a fetal head is impacted until you get your hand in there to try to deliver it. Once your hand is in the location, I would say your first attempt is to try to release it from that impaction and lift it up from the hysterotomy.").)

The experts disagreed, however, on the appropriate course once the initial attempt to release the fetal head was unsuccessful. Dr. Luciani testified that, once the initial attempt failed, the push-up method was indicated and should be done immediately.[34] (Tr. at 175-76, 189-90 (Luciani) ("You will initially just put your hand in to try to easily break the suction. That takes

[33] Although the transcript refers to the "additional attempt[,]"the transcript should read "an initial attempt[.]" (*See* 3/14/24 Mem. End., ECF No. 147, at 2 (adopting corrections to trial transcript).)

[34] Dr. Luciani also testified as to other methods for delivering a deeply impacted fetal head, including the "reverse breech" or pull technique. (Tr. at 179-80, 215 (Luciani).) However, both Dr. Luciani and Dr. Sutton agreed that, because Dr. Bui was not trained in the reverse breech method and because other alternatives, such as a fetal pillow, were unavailable, it was not a breach of the standard of care for her not to use those methods. (Tr. at 220 (Luciani); 308 (Sutton).)

about five seconds. And when it is unsuccessful, you immediately go to the push-up technique."), 202.) Dr. Luciani agreed with a statement from a medical article that the push-up method was "probably the oldest technique" for delivery of a deeply impacted fetal head and agreed with another article referring to the push-up method as "the standard approach" when comparing it to the reverse breech method.[35] (Tr. at 178-79 (Luciani); *see also* Pls.' Post-Trial Br. at 7-8.) Dr. Luciani testified that the push-up method was the standard of care because it was highly successful and kept the vertex in line with the spine, avoiding lateral movement.[36] (Tr. at 190 (Luciani).) Similarly, Dr. Luciani testified that Dr. Bui should not have attempted multiple digital impaction maneuvers because that "did not keep the vertex in the midline of the spine[,]" which presented dramatic risk of injury. (Tr. at 191; *see also id*. at 202.) However, Dr. Luciani also agreed that the push-up method is associated with significant risks when not performed properly. (Tr. at 181, 199, 208-09, 218.)

Dr. Sutton acknowledged that the push-up method was a commonly used technique. (Tr. at 311-12 (Sutton)).[37] However, Dr. Sutton testified that it was proper for Dr. Bui to have made

[35] Contrary to Plaintiffs' assertion (*see* Pls.' Post-Trial Br. at 7), Plaintiffs' counsel never sought to admit into evidence specific statements that were the subject of Dr. Luciani's testimony pursuant to Federal Rule of Evidence 803(18). (*See* Tr. at 168, 325, 502, 602 (listing exhibits received in evidence each day of trial).) Nonetheless, Defendant did not raise any objection to Plaintiffs' discussion of these statements and the Court finds that they otherwise are admissible. Accordingly, the Court has considered them in reaching its determination regarding the standard of care.

[36] Both Dr. Luciani and Dr. Sutton also testified regarding other methods for delivery of an impacted fetal head, including the reverse breech technique, fetal pillow and Tydeman Tube. (Tr. at 220-22 (Luciani), 281-82 (Sutton).) However, both doctors agreed that, because Dr. Bui was not trained in the reverse breech method and because other alternatives, such as a fetal pillow, were unavailable, it was not a breach of the standard of care for her not to use those methods. (Tr. at 220 (Luciani), 308 (Sutton).) Accordingly, the Court does not consider these alternative techniques.

[37] Dr. Sutton disagreed that the push-up method was the "standard" approach and testified that he personally preferred the reverse breech method. (Tr. at 307-08, 311-12 (Sutton).)

multiple attempts to flex the head forward. For example, Dr. Sutton testified that it was his understanding that, when Dr. Bui could not flex the head with her hand in the anterior position, "[s]he tried to get in at another angle to see if she was able to get around the head better to flex the head[,]" which he testified "a lot of us would do." (Tr. a 265.) Dr. Sutton explained that, even when flexing the head from either side, "you are still trying to flex it directly forward in the midline." (*Id*. at 266.) Dr. Sutton testified that this was the standard maneuver to release a baby from the canal and applied even when the fetal head was impacted in the maternal pelvis. (*Id*. at 269.)

Dr. Sutton also testified that Dr. Bui's approach was within the standard of care because she was able to deliver S.Y. using the standard technique, *i.e*., using her hand to flex the head chin to chest, in a reasonable amount of time. (Tr. at 264-68 (Sutton).) Dr. Sutton determined that the amount of time Dr. Bui spent trying to flex the head forward was not "so prolonged that it required moving on to the nonstandard maneuver." (*Id*. at 279; *see also id*. at 282 ("I have definitely done the pull technique when I really couldn't get the baby out the standard way, but I wouldn't say that if I'm at less than two minutes that I'm going for the pull technique; 314 ("There could be maneuvers to employ to disimpact the fetal head, but which you should use first and when, there is no standard saying at X minute you should use these maneuvers to the fetal head.").) In support of this conclusion, Dr. Sutton testified regarding a difficult fetus extraction protocol put in place at the hospital where he works, Mount Sinai West, where the delivering obstetrician will activate an alarm to call for assistance if delivery was not completed within three minutes. (Tr. at 268.) Dr. Sutton explained that, initially, the protocol called for an alarm after two minutes, but that was "too soon" and it was extended to three minutes. (*Id*.)

Plaintiffs move, pursuant to Rule 702 of the Federal Rules of Evidence and Rule 26 of the Federal Rules of Civil Procedure, to strike Dr. Sutton's testimony regarding timing of the delivery and the alarm protocol, arguing, *inter alia*, that this testimony has no probative value and is unreliable and that Dr. Sutton did not render an opinion regarding timing in his rebuttal expert report. (Pls.' Post-Trial Br. at 18-26.) Defendant argues that Plaintiffs' Rule 26 objection lacks merit and their remaining grounds for striking Dr. Sutton's testimony are both untimely and unfounded. (Def.s' Post-Trial Br., ECF No. 141, at 30-36.)

Federal Rule of Evidence 702 provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the proponent demonstrates to the court that it is more likely than not that: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert's opinion reflects a reliable application of the principles and methods to the facts of the case.

Fed. R. Evid. 702. "It is a well-accepted principle that Rule 702 embodies a liberal standard of admissibility for expert opinions[.]" *Nimely v. City of New York*, 414 F.3d 381, 395 (2d Cir. 2005). "The district court plays the role of gatekeeper, determining whether the expert's testimony is reliable and relevant." *Faison-Williams v. United States*, No. 24-1404, 2025 WL 974831, at *3 (2d Cir. Apr. 1, 2025) (citing *Amorgianos v. Nat'l R.R. Passenger Corp.*, 303 F.3d 256, 265 (2d Cir. 2002)); *see also Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). However, in a bench trial, there is no "risk of poisoning the jury with misleading expert testimony of limited probative value" and "the Court can take in the evidence freely and separate helpful conclusions from ones that are not grounded in reliable methodology." *Joseph S. v. Hogan*, No. 06-CV-01042 (BMC) (SMG), 2011 WL 2848330, at *3 (E.D.N.Y. July 15, 2011).

Under Federal Rule of Civil Procedure 26, a testifying expert is required to submit a report containing "a complete statement of all opinions the witness will express and the basis and reasons for them[.]" Fed. R. Civ. P. 26(a)(2)(B)(i). "The purpose of the expert disclosure rules is "to avoid surprise or trial by ambush." *Harkabi v. SanDisk Corp.,* No. 08-CV-08203 (WHP), 2012 WL 2574717, at *3 (S.D.N.Y. June 20, 2012) (cleaned up). Where "a party fails to provide information . . . as required by Rule 26(a) . . . the party is not allowed to use that information or witness . . . unless the failure was substantially justified or is harmless." Fed. R. Civ. P. 37(c)(1). "Imposing sanctions is a matter committed to the district court's discretion[.]" *Harkabi*, 2012 WL 2574717, at *4. "An expert's trial testimony may be precluded based on nondisclosure only when it expounds a wholly new and complex approach designed to fill a significant and logical gap in the first expert report." *Id.* at *3 (cleaned up). Moreover, the preclusion of evidence is a "drastic remedy." *Id*. at *4.

The Court agrees with Plaintiffs that Dr. Sutton's opinion regarding the standard of care based on the timing of delivery was not included in his report. (Pls.' Post-Trial Reply, ECF No. 144, at 1.) The portion of the report cited by Defendant (Def.'s Post Trial Br. at 32) pertains to Dr. Sutton's opinion regarding HIE, not the standard of care for delivery of an impacted fetal head. (*See* Sutton Report, ECF No. 81-7, at 8-13.) However, given Dr. Luciani's testimony that the standard of care was to "immediately" move to the push-up method after a single attempt to disimpact the fetal head (Tr. at 190, 202, 207 (Luciani)), the Court finds that Dr. Sutton's testimony as to the timing of the delivery was proper rebuttal testimony. *See F.D.I.C. v. Suna Assocs., Inc.*, 80 F.3d 681, 687-88 (2d Cir. 1996) ("[I]t is well-settled that a district court has wide discretion in determining whether to permit evidence on rebuttal.") (cleaned up). Dr. Luciani's

opinion regarding timing was not contained in his expert report (which focused on the push-up method as a way to avoid excessive lateral traction). (*See* Luciani Rpt., ECF No. 28-1, at 19-20.) Thus, there was no need for Dr. Sutton to address the timing of the delivery in his rebuttal report. Accordingly, Plaintiffs' motion to strike Dr. Sutton's testimony based on a violation of Rule 26 is denied.

Plaintiffs' motion pursuant to Rule 702 also is denied. Defendant is not seeking to introduce the protocol itself as evidence of the standard of care. Rather, they argue that the protocol informed Dr. Sutton's opinion that it was unnecessary for Dr. Bui to move on to a different delivery technique based on the time that had elapsed during the delivery. (Def.'s Post-Trial Br. at 36.) The Court, in its discretion, finds this opinion reliable based upon Dr. Sutton's experience. Nonetheless, the Court does not rely on this rebuttal testimony in determining the standard of care.[38]

While the Court finds both experts' testimony credible as to the standard of care, the Court concludes that the conflicting testimony shows that reasonable obstetricians can disagree about the proper approach when faced with this type of difficult delivery. The concern identified by Dr. Luciani with making multiple attempts to disimpact the fetal head is the risk of lateral traction.[39] (Tr. at 190-91 (Luciani).) Dr. Luciani testified that it was important to avoid lateral

[38] Nor does the Court give any weight to Dr. Sutton's testimony regarding the particular protocol in place at Mt. Sinai West, which was not instituted until 2023, well after the time of S.Y.'s delivery. (Tr. at 268 (Sutton) (testifying, in November 2024, that the protocol was implemented "last year").) Defendant does not dispute that the applicable standard of care is the standard at the time of S.Y.'s delivery. (*See* 3/13/25 Tr. at 43.)

[39] To the extent Plaintiffs argue that the push-up method was the standard of care because it "delivers the baby promptly" (Pls.' Post-Trial Br. at 5), the Court finds such argument is not supported by Dr. Luciani's testimony. Dr. Luciani did not testify that the push-up method was indicated because of timing, but rather due to the risk of excessive lateral traction (Tr. at 190-91, 194-95 (Luciani).) Although Dr. Luciani

movement "[b]ecause lateral movement and traction off the axis or the spine of the fetus puts an undue sprain on the nerves of the brachial plexus which increases the risk dramatically of cause of injury to those nerves in the fetal neck." (Tr. at 190.) In Dr. Luciani's view, the application of lateral traction is almost certain to occur if the fetal head is deeply impacted. (*Id*. at 191 (testifying as to "dramatic[]" risk of injury), 194 ("as you are moving the head out of the disimpaction, you are causing excessive lateral traction on the fetal head and specifically on the brachial plexus nerve of the neck").) Dr. Sutton's testimony suggests otherwise, but he was careful to explain that, even when attempting to flex the fetal head from the right or left, the obstetrician still would be trying to flex the head chin to chest or straight in the midline. (Tr. at 265-66 (Sutton).) Dr. Sutton does not dispute Dr. Luciani's testimony that it was important to avoid lateral traction. Both experts also testified that the push-up method had significant risks associated with it when it is not performed properly. (Tr. at 181, 199, 208-09 (Luciani); 280-281, 285-86 (Sutton).)

Having carefully considered the evidence regarding the standard of care, the Court finds that the standard of care is for the delivering obstetrician to make an initial attempt to disimpact the fetal head and then either to make additional attempts to disimpact the fetal head by flexing the fetal head forward in the midline or to move on to an alternative method, including the push-

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testified that the push-up method would take approximately 15 to 30 seconds "under uncomplicated conditions" (Tr. at 198), this testimony was given in support of Dr. Luciani's opinion that Dr. Bui had difficulty disimpacting the fetal head even though that was not documented in her operative note. (*See id*. at 197-98.) Dr. Luciani's testimony does not establish that the push-up method was indicated due to timing nor establish the standard of care with respect to the time period for a cesarean delivery under similar circumstances. Thus, the Court finds that Plaintiffs have not established by a preponderance of the evidence the standard of care with respect to the time frame for a delivery or that Dr. Bui breached such standard of care.

up method. Faced with risks from either approach, the Court finds that it was within the standard of care for Dr. Bui to choose to make multiple attempts to disimpact the fetal head as opposed to immediately moving on to the push-up method. *See Perez v. United States*, 85 F. Supp. 2d 220, 227 (S.D.N.Y. 1999), *aff'd*, 8 F. App'x 48 (2d Cir. 2001) ("Where alternative procedures are available to a physician, any one of which is medically acceptable and proper under the circumstances, there is no negligence in using one procedure rather than another.").

Nonetheless, the Court also finds that in making multiple attempts to disimpact the fetal head, the standard of care requires flexing the head only in the midline in order to avoid lateral traction. Thus, although the Court does not find that Dr. Bui's failure to utilize the push-up method constituted a breach of the standard of care, the Court considers Plaintiffs' argument that Dr Bui breached the standard of care by flexing the fetal head laterally. (Pls.' Post-Trial Br. at 4, 10-11.)

B. Breach Based Upon The Application Of Lateral Traction

Having found that the standard of care for delivery of an impacted fetal head includes making multiple attempts to disimpact the fetal head, as long as the delivering obstetrician avoids lateral traction, the Court next considers whether Dr. Bui applied lateral traction to the fetal head in breach of the standard of care.

The sole evidence as to the direction that Dr. Bui flexed the fetal head is her own testimony.[40] Dr. Bui testified that she had difficulty flexing the fetal head forward to bring it into the incision and tried to bring her hand around the fetal head to create a gap between the fetal

[40] *See, e.g.*, Tr. at 224 ("Q. No one else was present in the delivery room testified that there was excessive force applied, right? A. That is correct. Q. Nor did anyone else testify that there was lateral traction of any kind? A. There is no testimony to that effect.").

head and the maternal pubic symphysis to bring the head forward. (Tr. at 33 (Bui).) Dr. Bui first tried to bring her fingers around the fetal head on the anterior side, meaning in front of the baby's face, to try to find a gap between the fetal head and the maternal pubic symphysis. (*Id.* at 33-34.) She also tried to sweep her hand around the fetal left side and then the fetal right side "to gauge if there was a gap." (*Id.* at 36.) When asked if she tried the left side after she was unsuccessful on the anterior side, Dr. Bui testified that she "tried it whichever side was able to flex the head[.]" (*Id*.) Dr. Bui did not, to her knowledge, exert any pressure on the baby's head when she was trying to see if she could create a gap on the left side or the right side. (*Id*. at 37.)

There came a time when Dr. Bui exerted some force to bring the fetal head up and flex the head, but she did not remember whether her hand was on the left side, the anterior or the right side. (Tr. at 37-38 (Bui).) She testified that she "performed the delivery with a normal amount of force that I would use in the circumstance." (*Id*. at 71.) Dr. Bui testified that she considered using the push-up method, but decided not to because she was "able to create a gap to flex the fetal head forward without the additional maneuver." (*Id*. at 73.)

Portions of Dr. Bui's testimony indicate that she only or "mostly" flexed the head forward. (Tr. at 35 (Bui) ("I do not remember what side I was able to bring the fetal head and flex it forward."), 70 ("Q. In flexing the baby's head, was that a lateral movement or was that midline? A. It could move mostly at the midline towards the incision.") However, Dr. Bui also testified that she did not remember which way she flexed the head:

> Q. And it's true, is it not, Doctor, that you don't remember really what direction you were flexing the head, you were just flexing it in whichever direction it could flex, true?
>
> A. Yes.

> Q. And that would be flexing to the left, flexing to the right, whichever direction it could flex, true?
>
> A. I was flexing it to the direction where it was easiest to bring the head up which would be through the incision.
>
> Q. But when you said you did not remember what direction that was, do you remember what direction it was right now?
>
> A. No.

(Tr. at 40-41 (Bui).)

Based upon the Court's consideration of the entire record, including Dr. Bui's testimony and the contemporaneous medical records, and the Court's assessment of Dr. Bui's demeanor, the Court finds that Dr. Bui did not solely flex the fetal head in the midline, consistent with the standard of care. Rather, the Court finds that it is more likely than not that Dr. Bui applied lateral traction to the fetal head while she was bringing it up to the incision in breach of the standard of care.

VI. Second Element: Proximate Causation

"[C]ourts have repeatedly observed that the issue of causation in a medical malpractice case can be particularly difficult[.]" *A.B. by Alverez v. United States*, No. 16-CV-02554 (LMS), 2019 WL 10302175, at *9 (S.D.N.Y. Apr. 17, 2019) (quoting *Ledogar v. Giordano*, 122 A.D.2d 834, 836 (2d Dep't 1986) (collecting cases)). "Establishing proximate cause in medical malpractice cases requires a plaintiff to present sufficient medical evidence from which a reasonable person might conclude that it was more probable than not that the defendant's departure was a substantial factor in causing the plaintiff's injury." *Semel v. Guzman*, 84 A.D.3d 1054, 1055 (2d Dep't 2011). "A breach of duty was a substantial factor in causing the injury if it had such an effect in producing the injury that reasonable people would regard it as a cause of the injury." *U.G. by Nanema*, 2023 WL 3122702, at *2 (cleaned up). "Stated somewhat differently, a plaintiff must offer evidence

from which reasonable persons could conclude that it was 'more probable than not' that the injury was caused by the doctor's malpractice." *Gerace v. United States*, No. 03-CV-00166 (NPM) (GHL), 2006 WL 2376696, at *19 (N.D.N.Y. Aug. 10, 2006) (quoting *Mortensen v. Mem'l Hosp.*, 105 A.D.2d 151, 158 (1st Dep't 1984)), *aff'd*, 272 F. App'x 6 (2d Cir. 2008)).

"Importantly, the substantial factor need not be the only cause which produces the injury." *Gerace*, 2006 WL 2376696, at *19 (quotation omitted); *see also Kupczyk v. United States*, No. 12-CV-01493 (JBW), 2014 WL 12829482, at *19 (E.D.N.Y. Apr. 24, 2014). "In other words, a plaintiff is not required to eliminate every other possible cause." *Gerace,* 2006 WL 2376696, at *19 (cleaned up); *see also Skelly-Hand v. Lizardi*, 111 A.D.3d 1187, 1189 (3d Dep't 2013). However, "[w]here the facts proven show that there are several possible causes of an injury, for one or more of which the defendant was not responsible, and it is just as reasonable and probable that the injury was the result of one cause as the other, plaintiff cannot have a recovery, since [plaintiff] has failed to prove that the negligence of the defendant caused the injury." *Bernstein v. City of New York*, 69 N.Y.2d 1020, 1021 (1987) (citations omitted). If a plaintiff fails to meet its burden on causation, "the government [has] no burden to provide alternative proof of causation; it can simply rely on [the plaintiff's] failure of proof." *Perez v. United States*, 8 F. App'x 48, 52 (2d Cir. 2001) (internal quotation marks and citation omitted); *see also Monteagudo v. United States*, No. 21-2770, 2022 WL 17684574, at *2 (2d Cir. Dec. 15, 2022).

A. Brachial Plexus And Phrenic Nerve Injuries

Plaintiffs assert that S.Y. suffered a traumatic injury to the brachial plexus and phrenic nerve at birth caused by the application of excessive lateral traction to the fetal head during delivery, which, in turn, caused right-sided diaphragmatic paralysis, respiratory failure and HIE.

(Pls.' Post-Trial Br. at 1.) Defendant argues that Plaintiffs have not met their burden to show that lateral traction during delivery caused permanent injury to S.Y.'s brachial plexus and phrenic nerves or HIE and contend that it is reasonable and probable that his conditions have been caused by a still-undiagnosed congenital neuromuscular disorder with a likely genetic origin. (Def.'s Post-Trial Br. at 43-44.)

Plaintiffs presented testimony from Dr. Daniel Adler that S.Y. suffered a traumatic injury to the brachial plexus and phrenic nerve at the time of birth. (Tr. at 351, 360 (Adler).) Dr. Adler is a board-certified physician in the fields of pediatrics and neurology with special competence in child neurology. (Tr. at 330, 332.) Dr. Adler testified that, after reviewing the records and utilizing a differential diagnosis, it was his opinion that S.Y. suffered brachial plexus and phrenic nerve injuries caused by a traumatic injury to the fifth, sixth and seventh cervical nerves, whereby the nerves were stretched and partially torn. (Tr. at 360-61.)

Dr. Adler acknowledged that the January 13, 2020 MRI of the brachial plexus was read to be normal, but discounted those findings because the MRI was taken weeks after S.Y. was born, and it was his opinion that "a lot of [the imaging] abnormalities will go away if you don't image immediately." (Tr. at 379-80 (Adler); *see also id*. at 394-95.) With respect to the phrenic nerve injury, Dr. Adler testified that his opinion was supported by the EMG/NCS that was conducted at HSS on April 15, 2021. (Tr. at 360-61, 372-73 (Adler).) Dr. Adler explained that the nerve conduction study showed a slow electric current indicating abnormality of phrenic nerve function and the EMG was consistent with a chronic neurogenic process.[41] (Tr. at 372-74.) Dr. Adler also

[41] Neurogenic means originating in the nervous system. *Dorland's* at 1247.

noted that the EMG found no electrophysiologic evidence for active myopathy, but "EMG findings on muscles disease are very specific and not what [the consulting doctor] was recording in this study." (*Id*. at 374.)

Dr. Adler disagreed with the impression from the subsequent EMG performed at CHOP on September 27, 2021, that noted electrophysiological evidence most consistent with a diffuse chronic myopathic process. (Tr. at 375-76 (Adler).) Dr. Adler testified that the September 2021 EMG was a limited study that did not include, for example, the phrenic nerve, and that the description of the findings was, in his view, consistent with a neuropathy, or nerve illness, and not a myopathy. (*Id*. at 375.) Dr. Adler also discounted the report because it described the prior study as normal when it was not. (*Id*. at 375-76; *see also* Joint Ex. 4 at CHOP 68.)

Dr. Adler testified that his examination of S.Y. in February 2023 was consistent with permanent brachial plexus injury because there was stiffness and contractures[42] affecting only one of his arms and the majority of abnormalities involved the shoulder. (Tr. at 334, 359 (Adler).) Dr. Adler testified that, in his opinion, doctors who diagnosed congenital myopathy were wrong because it did not appear that they had reviewed all the medical records concerning S.Y.'s birth and did not factor that context into their opinions. (*Id*. at 376.) Dr. Adler also testified that, although genetic testing showed a gene abnormality associated with congenital myopathy, Li has the same gene and does not have myopathy. (*Id*. at 377.) Dr. Adler further ruled out congenital myopathy because babies with myopathy do not drink amniotic fluid, whereas here, Li had reduced amniotic fluid at birth.. (*Id*. at 377-78.) In Dr. Adler's view, S.Y.'s low muscle tone at birth

[42] Although the trial transcript says contractors, it should read contractures. (*See* 3/14/24 Mem. End. at 3.) A contracture is "a condition of fixed high resistance to passive stretch of a muscle[.]" *Dorland's* at 404.

was caused by HIE, which affected his entire body, but was a separate issue from the brachial plexus and phrenic nerve injuries which affected only his right side. (*Id*. at 378-79.)

Defendant presented testimony from Dr. Allan Rubenstein in rebuttal. Dr. Rubenstein is a clinical professor of neurology and pediatrics at the New York University School of Medicine and board certified in neurology with experience in the field of neurogenetics.[43] (Tr. at 400-01, 403-05 (Rubenstein).) Dr. Rubenstein opined, based on his examination of S.Y. and a review of the medical records, that a traumatic brachial plexus and phrenic nerve injury suffered at birth was an unlikely cause of S.Y.'s current condition. (Tr. at 415, 421.)

Dr. Rubenstein testified that traumatic brachial plexus palsies are uncommon in C- sections, which caused him to be skeptical of that diagnosis. (Tr. at 421-22, 425 (Rubenstein).) Dr. Rubenstein also testified that a permanent brachial plexus injury was unlikely based on the fact that S.Y. had persistent, and significant, at the age of three, right arm dysfunction, but that the brachial plexus MRI had been normal.[44] (Tr. at 422 (Rubenstein); *see also id*. at 427-28.)

Dr. Rubenstein testified that, in the case of severe, prolonged brachial plexus injury, "it would be quite unusual for the brachial plexus MRI to be normal[.]" (*Id*. at 422 (Rubenstein); *see also id*. at 426-30.) He explained that, in the most severe cases of traumatic brachial plexus palsy, there is avulsion, meaning the connections between the spinal roots, which exit from the spinal

[43] Neurogenetics is the area of genetics that involves genetic disorders related to the nervous system. (Tr. at 405 (Rubenstein).)

[44] The Court notes that, on two occasions, the transcript reflects that Dr. Rubenstein stated the MRI was "wrong." (Tr. at 422 ("And the MRI scan, which was done was wrong."), 428 ("And as I said, the MRI was wrong."). The Court raised this issue during post-trial argument, and Defendant's counsel suggested that the word "normal" had been mistranscribed as "wrong." (3/13/25 Tr. at 82-83.) The Court attempted to retrieve a backup recording from the court reporter, but none was available. Having carefully reviewed the entirety of Dr. Rubenstein's testimony, it is clear to the Court that he understood the MRI to have been normal and that his testimony was based upon that fact.

cord and the brachial plexus are completely severed. (*Id*. at 427.) Dr. Rubenstein further testified that he would expect to see avulsion if traumatic brachial plexus injury were the cause given three years of no improvement. (*Id.* at 427-28; *see also id*. at 428 ("If is there an [a]vulsion, then it should be seen, and that is the most severe form of brachial plexus.").) Thus, in his opinion, the January 13, 2020 brachial plexus MRI, which revealed no abnormal signal associated with the right or left brachial plexus or cervical plexus, was not consistent with a severe brachial plexus injury caused by trauma. (Tr. at 428-29; Joint Ex. 15 at NYP 01500.)

With respect to the phrenic nerve injury, Dr. Rubenstein testified that a phrenic nerve injury resulting from trauma at birth is "an extraordinarily rare phenomenon" (Tr. at 408 (Rubenstein)), particularly in a C-section delivery. (*Id*. at 425 ("Q. Does injury to the approximate phrenic nerve occur commonly in C-section deliveries, to your understanding? . . . A. As far as I'm concerned, it's unheard of. I did a literature search, I found one possible case in the entire literature. And that, by the way, was [a] C-section in which the phrenic nerve was involved, brachial plexus was not involved.").) In addition, it was not clear to him whether the issue was with the phrenic nerve or the diaphragmatic muscles on the right side themselves. (*Id*. at 422.) He further testified that, even in the rare cases of phrenic nerve injury due to birth trauma, many of the cases are temporary and, thus, "[f]or a phrenic nerve palsy from traumatic etiology to be permanent, which this case to date is, and for a child to require a tracheoscopy at age three would be unique." (*Id*. at 425-26.)

Dr. Rubenstein testified that his opinion that S.Y. has a neuromuscular problem present from birth was supported by findings from a June 9, 2021 MRI of S.Y.'s lower extremities, which he opined were indicative of a myopathy. (Tr. at 431-33 (Rubenstein); *see also id*. at 488-89; Joint

Ex. 17E at NYP 15225-15226.) In contrast, Dr. Rubenstein testified that this finding was not consistent with a brachial plexus trauma suffered at birth because "[t]he legs would not be involved in a traumatic brachial plexus palsy." (*Id*. at 433 (Rubenstein).)

Dr. Rubenstein testified that his opinion was consistent with a July 16, 2021 assessment from an orthopedic doctor at CHOP that, given underlying hypotonia and hypermobility, S.Y.'s global muscle weakness, which was worse in the right upper extremity, was most likely not consistent with a brachial plexopathy. (Tr. at 449-50 (Rubenstein); Joint Ex. 4 at CHOP 129-32.) He also testified that his opinion was supported by the September 2021 nerve conduction study and EMG from CHOP. (Tr. at 435-36 (Rubenstein).) Dr. Rubenstein testified that the nerve conduction studies were "pretty much normal" and the needle EMG findings were consistent and indicative of myopathy, which led to the conclusion that S.Y. had a diffuse myopathy and that there was no evidence of a coexisting brachial plexopathy. (*Id*. at 436.) Dr. Rubenstein acknowledged that the prior EMG, from April 2021 at HSS, was "somewhat contradictory" because it showed "some mild abnormalities of neurogenic, as opposed to myopathic origin." (*Id*. at 437-38.)

Dr. Rubenstein stated that the nerve conduction findings of the right arm showed "very mild dysfunction in the right arm and phrenic nerve," but "way less than one would expect for severe persistent brachial plexus palsy or phrenic nerve palsy." (Tr. at 439 (Rubenstein); *see also id*. at 484-85.) With respect to the impression of the neurologist conducting the tests that the results were not consistent with plexopathy but rather with possible multilevel cervical radiculopathy or neuronopathy, Dr. Rubenstein testified that he did not agree with the impression in the report that multilevel cervical radiculopathy was a possible diagnosis because

of a normal cervical spine MRI, but that a neuronopathy, which is a neuronal component of a neuromuscular problem, would be consistent with a congenital neuromuscular process and was "what [he] think[s] is going on here." (*Id*. at 448-49.)

Dr. Rubenstein also stated that his opinion was supported by a muscle ultrasound performed at CHOP on September 27, 2021. (Tr. at 440-43, 451-53 (Rubenstein); *see also* Joint Ex. 4 at CHOP 84-93.) Dr. Rubenstein testified that muscle ultrasounds are used "in a variety of neuromuscular problems, including radiculopathies[,] peripheral nerve problems, and myopathies." (*Id*. at 441.) Dr. Rubenstein further testified that some findings were "supportive of [his] impression that the basic issue with this child is the diffuse myopathy[,]" but acknowledged that other findings "didn't fit within the diffuse myopathic process" and "could be another neuropathic process." (*Id*. at 442-43.) However, he explained that the findings regarding a neuropathic process were in the right foot and forearm, which "confirmed [his] impression that whatever the cause, and [his] impression is that it's likely a congenital neuromuscular process, which is diffuse, there is absolutely no support here for a traumatic right brachial plexus palsy." (*Id*. at 443; *see also id*. at 451-53.)

Dr. Rubenstein further testified with respect to a subsequent muscle ultrasound performed by doctors at NIH on April 26, 2022. (Tr. at 444-46, 454-56 (Rubenstein); *see also* Joint Ex. 14 at NIH 32.) Dr. Rubenstein noted that S.Y. was referred to NIH because of concern that he may have a congenital neuromuscular diagnosis. (*Id*. at 444 (Rubenstein).) Dr. Rubenstein testified that the NIH muscle ultrasound found similar abnormalities in both the upper and lower extremities bilaterally, which, would not be expected where there was a traumatic injury to the brachial plexus. (*Id*. at 445, 456.)

Having carefully reviewed the medical evidence and expert testimony, and assessed the credibility of the witnesses, the Court finds that Plaintiffs have shown by a preponderance of the evidence that S.Y. suffered brachial plexus and phrenic nerve injuries at birth, but have not established by a preponderance of the evidence that S.Y. suffered a permanent brachial plexus injury or that these injuries account for the entirety of his current condition.

As Plaintiffs persuasively argue, brachial plexus and phrenic nerve injuries were the near uniform diagnoses of the treating doctors who examined S.Y at or near the time of his birth in December 2019. (S*ee* Section IV, *supra*.) However, the record evidence does not support that the brachial plexus injury was permanent. The brachial plexus MRI performed in January 2020 (a little more than a month after birth) was normal. (Jt. Ex. 17 at NYP 1500-01.) The Court finds credible and persuasive Dr. Rubenstein's testimony that it would be quite unusual for the brachial plexus MRI to be normal in the case of a severe brachial plexus injury, but that it was possible that a mild brachial plexus injury might not show up in an MRI. (Tr. at 422, 429 (Rubenstein).). This also is consistent with contemporaneous notes from S.Y.'s treating physicians that the MRI may be consistent with a more subtle stretch injury. (Jt. Ex. 17 at NYP 00601.) Dr. Adler's testimony that some abnormalities would not show up on imaging after a few weeks rings true for less severe cases (*see* Tr. at 380 (Adler)), but he did not credibly explain why a severe injury would not be visible.

The EMG/NCS studies from April 2021 (*see* Jt. Ex. 10 at HSS 041), which were discussed by both experts, also support the Court's finding that S.Y. suffered brachial plexus and phrenic nerve injuries at birth. For example, as Dr. Adler credibly testified, the NCS studies showed evidence of nerve damage affecting only the right side and specific evidence of abnormal function

of the phrenic nerve. (*See* Tr. at 360-61, 372-74 (Adler).) But, again, these studies, in the Court's view, call into question the severity of these injuries. The Court credits Dr. Rubenstein's testimony that the nerve conduction findings showed "very mild dysfunction in the right arm and phrenic nerve," but "way less than one would expect for severe persistent brachial plexus palsy or phrenic nerve palsy." (Tr. at 439 (Rubenstein); *see also id*. at 484-85.) The Court also finds persuasive and credible Dr. Rubenstein's testimony, supported by the later medical evidence, that the earlier diagnoses do not explain many of S.Y.'s persistent symptoms, including muscle weakness affecting all his lower extremities. (Tr. at 431-33 (Rubinstein).)

Although the Court credits the assessments of S.Y.'s treating doctors at Weill Cornell with respect to S.Y.'s condition at birth, S.Y.'s doctors at CHOP and NIH had the benefit of his entire medical history and a fuller picture of S.Y.'s condition. To be sure, there is evidence in the record to support the theory that S.Y. has an unknown myopathy. However, that theory does not persuasively explain S.Y.'s condition at birth, which primarily impacted his right side. With respect to the phrenic nerve in particular, although Dr. Rubenstein testified that it was not clear to him whether the issue was with the phrenic nerve or the diaphragmatic muscles on the right side, he did not explain why a congenital myopathy would have affected only the right side. Moreover, while the possibility of a congenital myopathy of genetic origin cannot be ruled out, there is no current affirmative evidence to support the conclusion that S.Y. has a myopathy of genetic origin, and Defendant does not contend otherwise.[45] (*See* Tr. at 567-69, 571-73 (Spencer-Manzon); *see also* Def.'s Post-Trial Br. at 28-29.)

[45] Plaintiffs had moved to preclude the opinions of Dr. Spencer-Manzon, Dr. Rubenstein and Dr. Sutton that S.Y. had a genetic defect that caused his injuries, and the Court denied that motion without prejudice. *Yang v. United States*, 745 F. Supp. 3d 60, 68 (S.D.N.Y. 2024). Having heard the testimony and considered

In reaching its conclusion regarding S.Y.'s injuries, the Court is mindful that a unifying diagnosis for S.Y.'s condition has, thus far, eluded physicians at some of the nation's finest medical institutions. Nonetheless, for the reasons set forth above, the Court finds that the scales tip in favor of Plaintiffs and that Plaintiffs have established by a preponderance of the evidence that S.Y. suffered brachial plexus and phrenic nerve injuries at birth.

B. Whether The Application Of Lateral Traction Was A Substantial Factor In Causing S.Y.'s Injuries At Birth

Having found that Plaintiffs have established by a preponderance of the evidence that S.Y. suffered from brachial plexus and phrenic nerve injuries at birth, the Court next considers whether that the application of lateral traction by Dr. Bui was a substantial factor in causing S.Y.'s injuries.

Plaintiffs' expert, Dr. Luciani, testified that the application of excessive lateral traction to the fetal head can cause injuries to the brachial plexus and phrenic nerves. (Tr. at 194-95 (Luciani).) Dr. Bui also testified brachial plexus and phrenic nerve injuries can be caused by excessive traction applied by the obstetrician. (*Id*. at 47-48 (Bui).) Defendant's expert, Dr. Sutton, did not explicitly counter this testimony, but testified that it did not make sense to him how a fetal head deeply wedged in the pelvis could be laterally displaced. (*Id.* at 318-19 (Sutton).)

With respect to the amount of force required to cause an injury, Dr. Luciani and Dr. Adler testified that a severe or permanent brachial plexus injury would require approximately 40 to 80

these arguments, the Court, in its discretion, finds that the testimony is admissible under the liberal standard of Rule 702. *See Com. Funding Corp. v. Comprehensive Habilitation Servs., Inc.*, No. 01-CV-03796 (PKL), 2004 WL 1970144, at *5 (S.D.N.Y. Sept. 3, 2004) (internal quotation marks and citations omitted) ("[A]ll doubts at a bench trial should be resolved in favor of admissibility."). Nonetheless, as set forth herein, the Court does not give much weight to the testimony regarding a genetic defect, except to conclude that the possibility of a congenital myopathy of genetic origin cannot be ruled out.

pounds of force. (*See* Tr. at 222-23 (Luciani); 273, 389-91 (Adler).[46]) Dr. Sutton testified that he could not envision how it would have been possible for Dr. Bui to apply that amount of force during the C-section. (*Id*. at 273, 278 (Sutton).) However, Dr. Luciani also testified that "normal force" utilized in the wrong direction could cause injury (Tr. at 197 (Luciani) ("The problem is that if normal force is utilized in the wrong direction, meaning laterally, can be enough to cause kind of the injury[.]"), 199 ("the nerves in the fetal neck are subject to trauma with force utilized in the wrong direction")), that 40 to 80 pounds is an average, and that the tensile strength of the brachial plexus differs from child to child. (*Id*. at 222-23.)

Dr. Luciani testified that he reached his opinion that S.Y. suffered from a traction injury in this case based upon the manner in which Dr. Bui performed the delivery and by ruling out other possible causes of brachial plexus and phrenic nerve injuries, including a tumor, genetic abnormality, congenital problem, a uterine abnormality or bone tissue obstruction. (Tr. at 195-96, 222, 224-26 (Luciani).) Dr. Luciani relied upon the opinions of other physicians to rule out these other causes, including genetic disease. (*See* Tr. at 226 ("Q. You also ruled out genetic causes, is that right? A. I didn't rule them out. Everybody that worked the patient up ruled them out."). Dr. Luciani further testified that his opinion as to causation extended to the injury to the phrenic nerve because the injury was to nerve roots C3, C4, and C5, which is where the phrenic nerve comes off the brachial plexus. (Tr. at 226.) Dr. Sutton testified that a differential diagnosis to determine the cause of brachial plexus and phrenic nerve injuries is not within his training, education or experience as an obstetrician. (Tr. at 299-300, 320.)

[46] The Court gives little weight to the opinions by Dr. Adler regarding whether the maneuvers performed by Dr. Bui could have resulted in this amount of force, which the Court finds is in the purview of an obstetrician and not a neurologist, as Dr. Adler himself acknowledged. (*See* Tr. at 335-36, 355, 368 (Adler).)

Dr. Luciani also testified that, assuming S.Y. suffered a traction injury to the brachial plexus and phrenic nerve, Dr. Bui must have used excessive lateral force. (*Id*. at 195 ("Q. Doctor, assuming that the baby did suffer a traction injury to the brachial plexus and phrenic nerve, do you have an opinion with a reasonable degree of certain[ty] as to whether Dr. Bui used excessive lateral force on this baby's head during this delivery and that this was a substantial factor in causing the injury. A. Well, my opinion is that looking at the actual delivery itself, the technique, the neurological evaluation, this was a lateral traction injury, which was caused specifically by Dr. Bui's technique, which was improper, and it deviates from the accepted standard of care."). Dr. Sutton testified that he could not envision how Dr. Bui could have laterally displaced the fetal head when it was deeply wedged in the pelvis. (Tr. at 272-73, 279, 318-19, 323 (Sutton).)

From a neurologist's perspective, Dr. Adler testified that, although it was not common to see an injury to the brachial plexus and the phrenic nerve at the same time (Tr. at 361 (Adler)), he concluded that that was what happened in this case because the injuries were on the same side and only one side, suggesting a single traumatic event. (*Id*. at 362-64.) Dr. Adler testified that he agreed with the assessment of Dr. Palaganas, the attending pediatric neurologist who examined S.Y. on December 15, 2019, that, because there was improvement in posture and weakness of S.Y.'s right arm and the injury to the brachial plexus and phrenic nerve were on the same side, S.Y.'s presentation was most consistent with traction injury. (Tr. at 362.) Dr. Adler explained that he agreed with that assessment because:

> This is the typical course of a newborn who suffers a traumatic injury, traction related to the nerves of the brachial plexus. And to some extent, the stretching of the nerve will cause the nerve to cease functioning. If the nerve isn't completely torn in half, then some degree of a recovery can occur quickly. To see a baby with a paralyzed arm on day one who has partial recovery on day five or day ten is typical. And there is -- because of the anatomic proximity, meaning the phrenic

> nerve and the nerve of the brachial plexus are sitting right on top of each other, so you are talking about an injury in a specific anatomical location. In a newborn without other problems, that could only be trauma, and the traumatic event has to be a single event.

(Tr. at 363; *see also id*. at 364 ("Everything occurred at exactly the same time, and the only way to create that is with a forceful stretch of the nerves.").)

Having considered the entirety of the expert testimony, and the trial record as a whole, the Court finds that Plaintiffs have met their burden to establish, by a preponderance of the evidence, that the application of lateral traction by Dr. Bui was a substantial factor in causing S.Y.'s brachial plexus and phrenic nerve injuries at birth. The Court credits Dr. Luciani's testimony that injury to the brachial plexus and phrenic nerve could occur by the application of even a "normal" amount of force in the wrong direction. The Court finds that the testimony that 40 to 80 pounds, on average, is required to cause a severe or permanent injury does not suggest that a stretch injury cannot occur short of that threshold. Indeed, Dr. Luciani credibly testified that the amount of force necessary to cause injury will differ from child to child. Moreover, of the two possible causes for this type of injury offered by the neurology experts (*i.e.*, lateral traction or a genetic abnormality),[47] the Court finds credible and persuasive Dr. Adler's testimony that the fact that the brachial plexus and phrenic nerve injury occurred on the same side, and only one side, is evidence that those injuries occurred as a result of trauma and not a congenital myopathic process.

[47] The Court gives little weight to Dr. Luciani's differential diagnosis as to the possible causes of brachial plexus and phrenic nerve injuries, which, based on Dr. Sutton's testimony, the Court finds is within the purview of neurologists rather than obstetricians. (Tr. at 299-300 (Sutton).)

For these reasons, the Court finds that Plaintiffs have met their burden to establish, by a preponderance of the evidence, that the application of lateral traction by Dr. Bui proximately caused S.Y.'s brachial plexus and phrenic nerve injuries at birth.

C. Whether Injury To The Phrenic Nerve Caused Right-Sided Diaphragmatic Paralysis, Respiratory Failure And HIE

Plaintiffs argue that the brachial plexus and phrenic nerve injuries caused S.Y. to suffer right-sided diaphragmatic paralysis, respiratory failure and HIE. (Pls.' Post-Trial Br. at 1.) The Court finds that Plaintiffs have met their burden to show that S.Y. suffered right-sided diaphragmatic paralysis resulting from damage to the phrenic nerve and that this issue was a substantial factor in S.Y.'s respiratory failure at birth. As set forth above, right-sided diaphragmatic paralysis was well-documented and noted to be secondary to phrenic nerve palsy and Defendant's suggestion that S.Y.'s respiratory failure was caused entirely by a myopathy is not persuasive based on the evidentiary record. However, as set forth above, records from Weill Cornell reflect that S.Y.'s continued respiratory problems after his plication surgery stemmed from problems unrelated to phrenic nerve palsy, which ultimately led to his need for a tracheostomy and G tube. (*See* Section IV, *supra*.) Moreover, Dr. Rubenstein credibly testified that S.Y.'s diaphragm function improved (Tr. at 408-09 (Rubenstein)) and that many cases of phrenic nerve palsy are temporary, and "[f]or a phrenic nerve palsy from traumatic etiology to be permanent, which this case to date is, and for a child to require a tracheoscopy at age three would be unique." (*Id*. at 426.)

"It is often true, as it is in this case, that causation issues are relevant both to liability and to damages. Thus, in a medical malpractice case, liability cannot be established unless it is shown that the defendant's malpractice was a substantial factor in causing the plaintiff[']s injury. . . . But

even where liability is established, the plaintiff may recover only those damages proximately caused by the malpractice." *See Oakes v. Patel*, 20 N.Y.3d 633, 647 (2013) (citation omitted)). Accordingly, the Court reserves for the damages phase further determinations regarding the extent to which S.Y.'s current respiratory problems are attributable to the phrenic nerve injury.

With respect to HIE, Dr. Adler testified that S.Y. suffered HIE and permanent brain damage as a result of events that began during the C-section. (Tr. at 352-54 (Adler).) Dr. Adler testified that HIE was the diagnosis of S.Y.'s treating physicians and would cause low tone. (*Id*. at 378.) He further testified that, in his opinion, S.Y. had bilateral neurological abnormalities from hypoxia in addition to a one-sided abnormality of the diaphragm from damage to the phrenic nerve, "[s]o two separate but unique neurological issues that both occurred at the same time." (*Id*. at 379.) Dr. Adler explained that the fact that a brain MRI at birth was normal did not change his opinion because many changes are microscopic and 25 to 30 percent of babies will have normal imaging in similar circumstances. (*Id*.)

Defendant's neurological expert, Dr. Rubenstein, opined that S.Y. likely suffered moderate HIE at birth based upon the fact that S.Y. had respiratory distress and needed to be resuscitated and underwent a body and brain cooling procedure for HIE, as well as subsequent clinical evidence consistent with developmental delay caused by HIE. (Tr. at 415-16, 457-58 (Rubenstein).) Dr. Rubenstein agreed that brain MRIs often, but not always, show abnormalities, particularly with the availability of brain cooling treatment, which S.Y. underwent. (*Id*. at 458-59.) Based upon the neurological experts' testimony, the Court finds that Plaintiffs have shown by a preponderance of the evidence that S.Y. suffered HIE at birth.

With respect to causation, the majority of Dr. Adler's testimony at trial focused on his opinion that HIE was caused by a prolonged delivery. Dr. Adler testified that S.Y. suffered HIE and permanent brain damage as a result of events that began during the C-section and, in particular, that the length of time from the time of incision until the time of delivery was a substantial factor in causing HIE. (Tr. at 352-54 (Adler).) He further testified that, in his opinion, S.Y.'s heart rate stopped while Dr. Bui was trying to extract the fetus and that the HIE occurred because of a lack of circulation to the nervous system. (*Id*. at 347, 352-53.) Dr. Adler explained that "the longer the baby is in the pelvis undelivered, the greater the amount of blood volume is being sent into the placenta and not returning from the placenta, leading to low blood pressure and ultimately an absent heartbeat." (*Id*. at 354.) He further testified that S.Y. had low muscle tone as a result of HIE and that the bilateral neurological abnormalities from HIE were separate from the unilateral abnormalities resulting from the brachial plexus and phrenic nerve injuries. (*Id*. at 378-79.) Dr. Adler testified that S.Y suffered from motor and language delay, difficulty swallowing and behavior disturbance with features of autism all caused by hypoxia. (*Id*. at 380-81.) On cross examination, Dr. Adler also testified that S.Y. suffered HIE as a result of injury to the phrenic nerve and that, if S.Y. had not suffered a phrenic nerve injury, he would not have had respiratory failure. (*Id*. at 395.)

Dr. Rubenstein testified that, in his opinion, HIE was caused by the fact that S.Y. was born with no diaphragmatic function and was in respiratory distress, but that the diaphragmatic dysfunction was caused by a congenital neuromuscular process and not a traumatic event involving the brachial plexus and phrenic nerve. (Tr. at 415-16, 459 (Rubenstein).) Dr. Rubenstein disagreed with Dr. Adler's opinion that S.Y.'s hypotonia was causally related to HIE because it is

unusual for hypotonia caused by HIE to be present past two years of life. (*Id*. at 460-61.) Dr. Rubenstein further testified that there was a genetic cause for the congenital problem based on the lack of evidence for an environmental cause or an infection. (*Id*. at 462-63.) Dr. Rubenstein testified that it was his opinion that S.Y.'s condition had a genetic cause, but he could not identify a specific gene that he could say with medical certainty was causing it. (*Id*. at 491.)

Defendant moves to exclude Dr. Adler's opinion at trial that the amount of time Dr. Bui took to deliver S.Y. was a substantial factor in causing S.Y. to suffer HIE, which Defendant argues exceeded the scope of his expert report. (Def.'s Post Trial Br. at 36-39; *see also* Tr. at 353-54 (Adler) ("Q. Doctor, with regard to the issue of timing, was the interval from the time that this baby -- from the time of incision until the time of delivery a substantial factor in causing this baby to suffer hypoxic ischemic encephalopathy? A. Yes.")). Plaintiffs argue that this opinion was within the scope of Dr. Adler's report based on his opinion that S.Y. suffered brain damage "as a result of events that began during the cesarian section and continued until he was successfully resuscitated" and that Dr. Adler elaborated on this opinion during his deposition and tied his testimony to that portion of his report. (Pls.' Post-Trial Br. at 36-37.)

Having carefully considered the issue, the Court, in its discretion, finds that Dr. Adler's testimony elaborates on his opinion that HIE began during the C-section and, in any event, that the drastic remedy of preclusion is not warranted. Notably, Plaintiff is not asserting a claim based on delay of delivery as a separate breach of the standard of care.[48] Thus, the Court considers this

[48] The Court does not consider Dr. Adler's timing-related testimony to the extent it relates to the standard of care. Plaintiffs assert that Dr. Adler's testimony regarding delay in delivery was not offered as evidence of Dr. Bui's departure from the standard of care, but in response to Dr. Sutton's testimony that the delivery was timely. (Pls.' Post-Trial Br. at 36; *see also* 3/13/25 Tr. at 22-23.) As set forth above, the Court does not

testimony only with regard to whether injury to the phrenic nerve was a substantial factor in causing S.Y. to suffer HIE. In this regard, Dr. Adler's testimony that HIE was caused by a process that began during delivery and was separate from the phrenic nerve injury establishes that, at a minimum, there was another cause that contributed to S.Y.'s HIE. (*See* Tr. at 352-53, 378-79 (Adler).) Indeed, Plaintiffs do not assert that the phrenic nerve injury was the only cause of S.Y.'s respiratory failure at birth. (*See, e.g.*, 3/13/25 Tr. at 12, 16.)

Nonetheless, the substantial factor standard "recognizes that often many acts can be said to have caused a particular injury, and requires only that defendant's actions be a substantial factor in producing the injury." *Jaquez v. Flores*, No. 10-CV-02881 (KBF), 2016 WL 1267780, at *2 (S.D.N.Y. Mar. 30, 2016); *see also Kupczyk*, 2014 WL 12829482, at *19 (plaintiff need not show that departure was only cause of injury). Dr. Adler testified that if S.Y. had not suffered a phrenic nerve injury, he would not have had respiratory failure and that phrenic nerve injury was the "substantive" cause of HIE. (Tr. at 395 (Adler).) Dr. Rubenstein also testified that HIE was the result of S.Y. being born with no diaphragmatic function and in respiratory distress. (*Id*. at 459 (Rubenstein).) Although there appears to have been more than one contributing factor to S.Y.'s respiratory failure, the Court finds that Plaintiffs have met their burden to show that the phrenic nerve injury and resulting diaphragmatic paralysis was a substantial factor in causing respiratory failure and HIE. The Court reserves for the damages phase further determinations regarding the extent to which S.Y.'s current neurological condition is the result of HIE at birth. *See Oakes*, 20 N.Y.3d at 647.

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rely on Dr. Sutton's testimony regarding timing in determining the standard of care. (*See* Section V(A), *supra*.)

CONCLUSION

For the reasons set forth above, the Court finds that Defendant is liable for medical malpractice based upon Dr. Bui's breach of the standard of care by using lateral traction during S.Y.'s delivery, thereby proximately causing injuries to S.Y. This case will now proceed to a damages trial. No later than May 30, 2025, the parties shall file a Joint Pretrial Order in advance of such trial, and shall file a joint letter setting forth weeks in June, July and August 2025 when the parties and their witnesses are *unavailable* for trial.

SO ORDERED.

Dated: New York, New York
April 30, 2025

Stewart D. Aaron

STEWART D. AARON
United States Magistrate Judge